



# HAZMAT

**T**housands of incidents occur each year in which oil or chemicals are released into the environment as a result of accidents or natural disasters. Spills into our coastal waters, whether accidental or intentional, can harm people and the environment and cause substantial disruption of waterways with potential widespread economic impacts. HAZMAT provides scientific expertise for successful incident response, thus reducing harm to people, the economy, and the environment. Under the National Contingency Plan, NOAA's Office of Response and Restoration (OR&R) has responsibility for providing scientific support for oil and hazardous material spills. To support this mandate, the OR&R Hazardous Materials Response Division (HAZMAT) provides 24-hour support to spill events.

The job of the NOAA Scientific Support Coordinator (SSC) is to coordinate the science and to provide answers to the Federal On-Scene Commander. The questions most asked by government, industry and the public are:

- What area will be affected by the spill?
- How will the area be affected?
- What can be done to speed recovery?

HAZMAT's oceanographers, modelers, biologists, chemists, geologists, and SSCs provide answers to these questions during spill events as well as for drills, exercises, and contingency planning. SSCs are located with U.S. Coast Guard



Marine Safety Offices to more efficiently provide local services to a range of users in public and private sectors. HAZMAT services include:

- Supporting emergency response activities
- Assisting in the development of contingency plans
- Providing tools for local decision makers
- Implementing training

HAZMAT facilitates spill prevention, preparedness, response, and restoration at national and local levels. By working at both national and local levels on planning activities, HAZMAT provides expertise and diversity on such issues as dispersant use, alternate response technologies, and response countermeasures.

HAZMAT's scope encompasses the entire U.S. coastline, including the Great Lakes, the Gulf of Mexico, Alaska, and Hawaii. In the last twenty-five years, HAZMAT has responded to virtually every major marine spill in the U.S. In addition, HAZMAT's expertise is frequently sought internationally. While oil and chemical spills are the major focus, HAZMAT also provides support for incidents such as downed aircraft, search and rescue, and tracking floating objects.

## Response

HAZMAT responded to over 110 events in 2001. Some of the most notable responses were:

- HAZMAT scientists deployed to the Galapagos Islands as part of a U.S. team to help mitigate the oil spill risk from a grounded tanker.
- HAZMAT team members worked with the U.S. Navy in their efforts to recover the Japanese research vessel, *Ehime Maru*, after the tragic collision with a U.S. submarine.
- HAZMAT staff provided support to the USCG for investigating potential pollution in the East Hudson River as a result of the collapse of the World Trade Center.

## Preparedness

Tools, guidelines and small, field-oriented job aids are developed by HAZMAT to assist preparedness for response communities. NOAA has provided standard techniques for observing oil, assessing shoreline impact, and evaluating and selecting cleanup technologies that have been widely accepted by response agencies.

Environmental Sensitivity Index (ESI) maps are used to identify vulnerable resources and habitats in advance of emergencies so that appropriate response actions can be planned. HAZMAT works with local experts to develop or update these maps throughout the country. Maps are published in hardcopy and digital formats, and translators are maintained to assist in using this data in GIS environments.

Some of the more widely distributed tools HAZMAT develops include a trajectory forecasting tool, GNOME, the oil weathering model ADIOS, and the chemical hazard tools, CAMEO and Reactivity. GNOME location files provide a mechanism for end-users to explore various potential spill scenarios. The Automated Data Inquiry for Oil Spills (ADIOS) provides planners and responders with information on how thousands of different oils could

physically or chemically change over time under various scenarios. The Computer Aided Management of Emergency Operations (CAMEO) program, developed jointly with the Environmental Protection Agency, provides first responders with information and tools for chemical incidents.

## Training

HAZMAT provides training to individuals in industry and government on the scientific aspects of oil and chemical spill response. Over 800 individuals were trained in 2001. The goal of HAZMAT training is to transfer scientific expertise and experience to the broadest possible audience. Successful training promotes more efficient planning and spill response. Each month, an average of 40,000 individuals visit the HAZMAT internet site ([www.response.restoration.noaa.gov](http://www.response.restoration.noaa.gov)), where additional reports, response tools, and training materials are available.

For additional information, visit our website at [www.response.restoration.noaa.gov](http://www.response.restoration.noaa.gov), or call 206/526-6317. For 24-hour emergency assistance, call 206/526-4911.



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